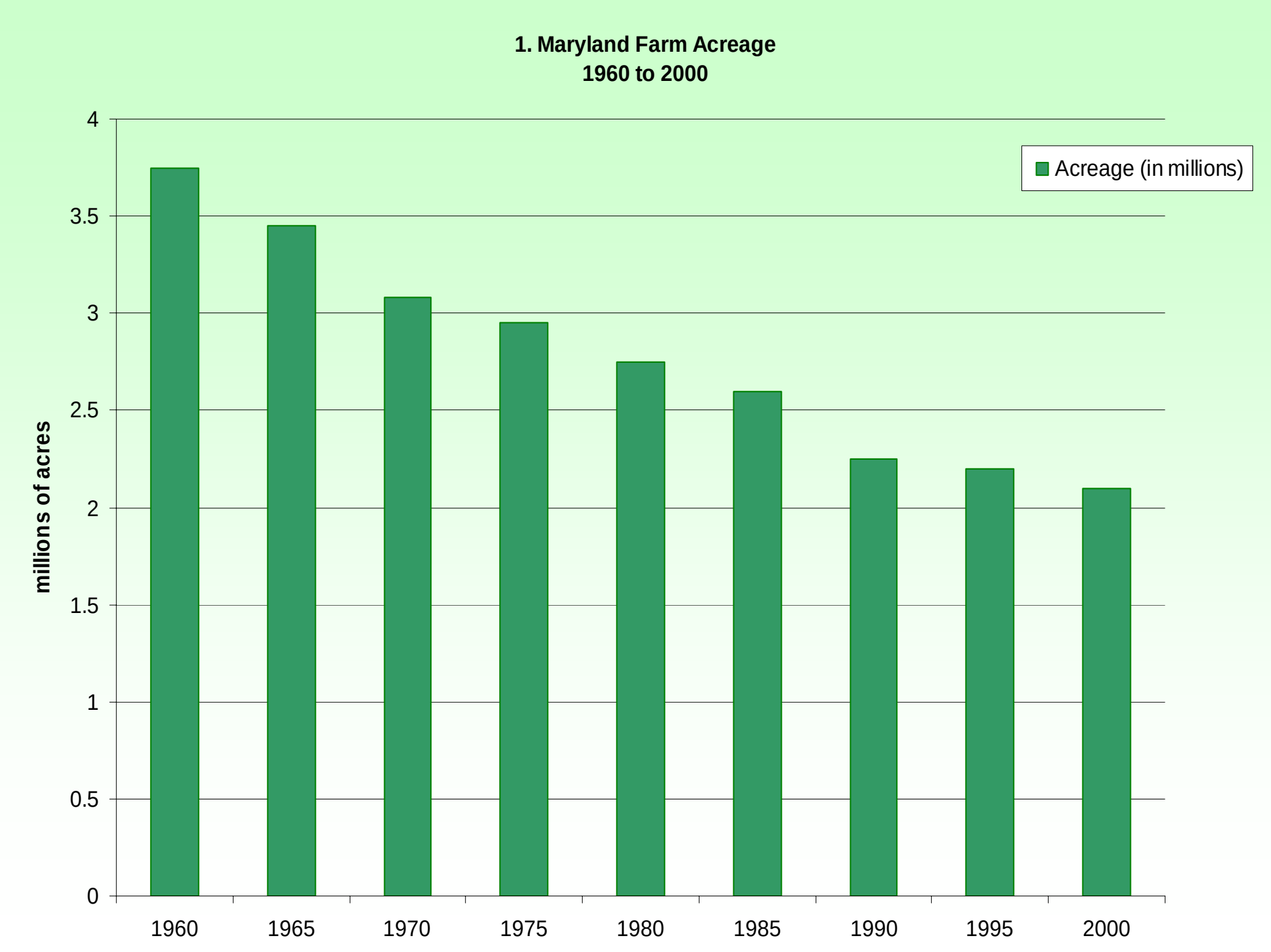
Maryland Fertilizer Use Trends

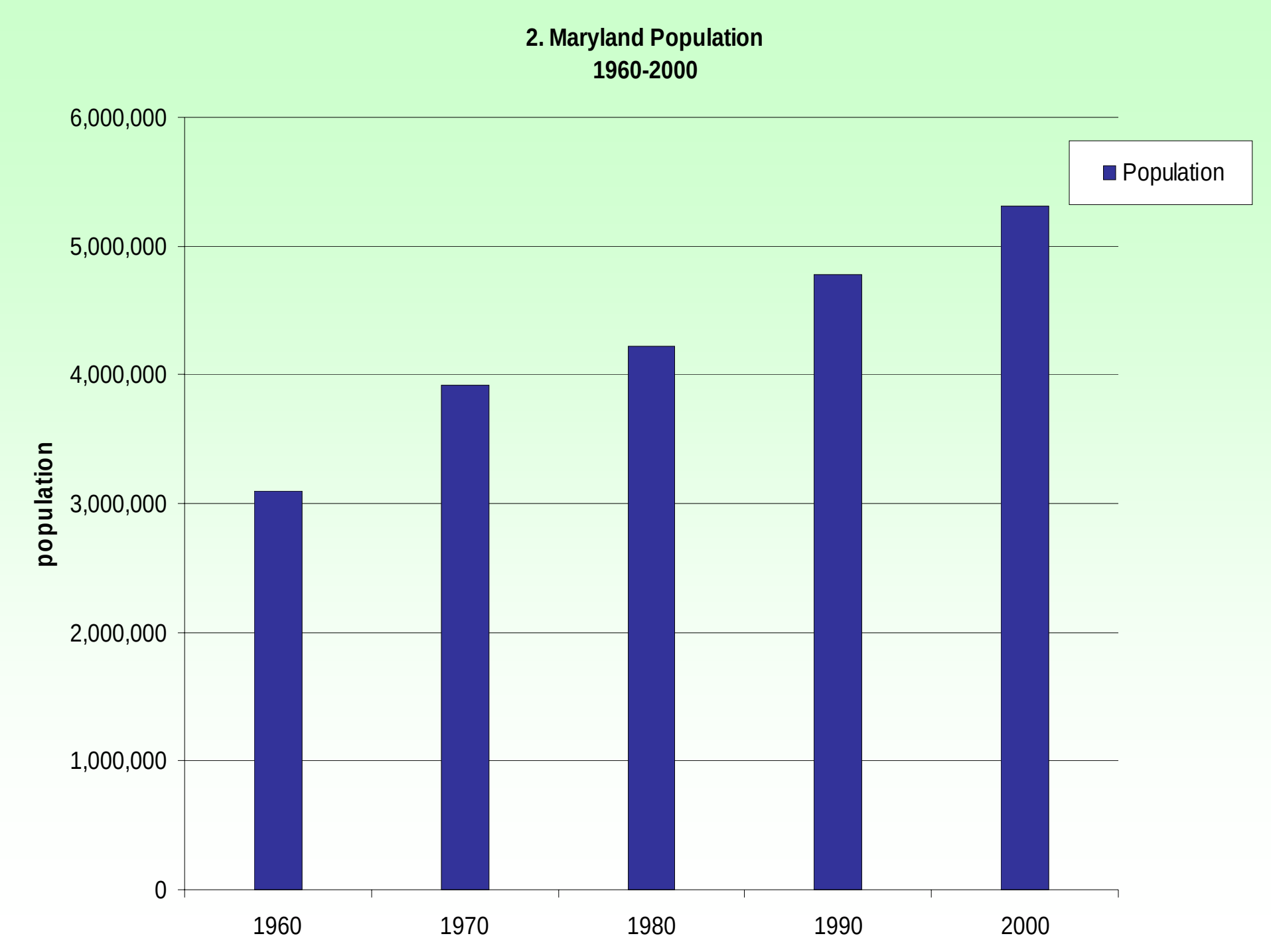
Montgomery County Department of Economic Development

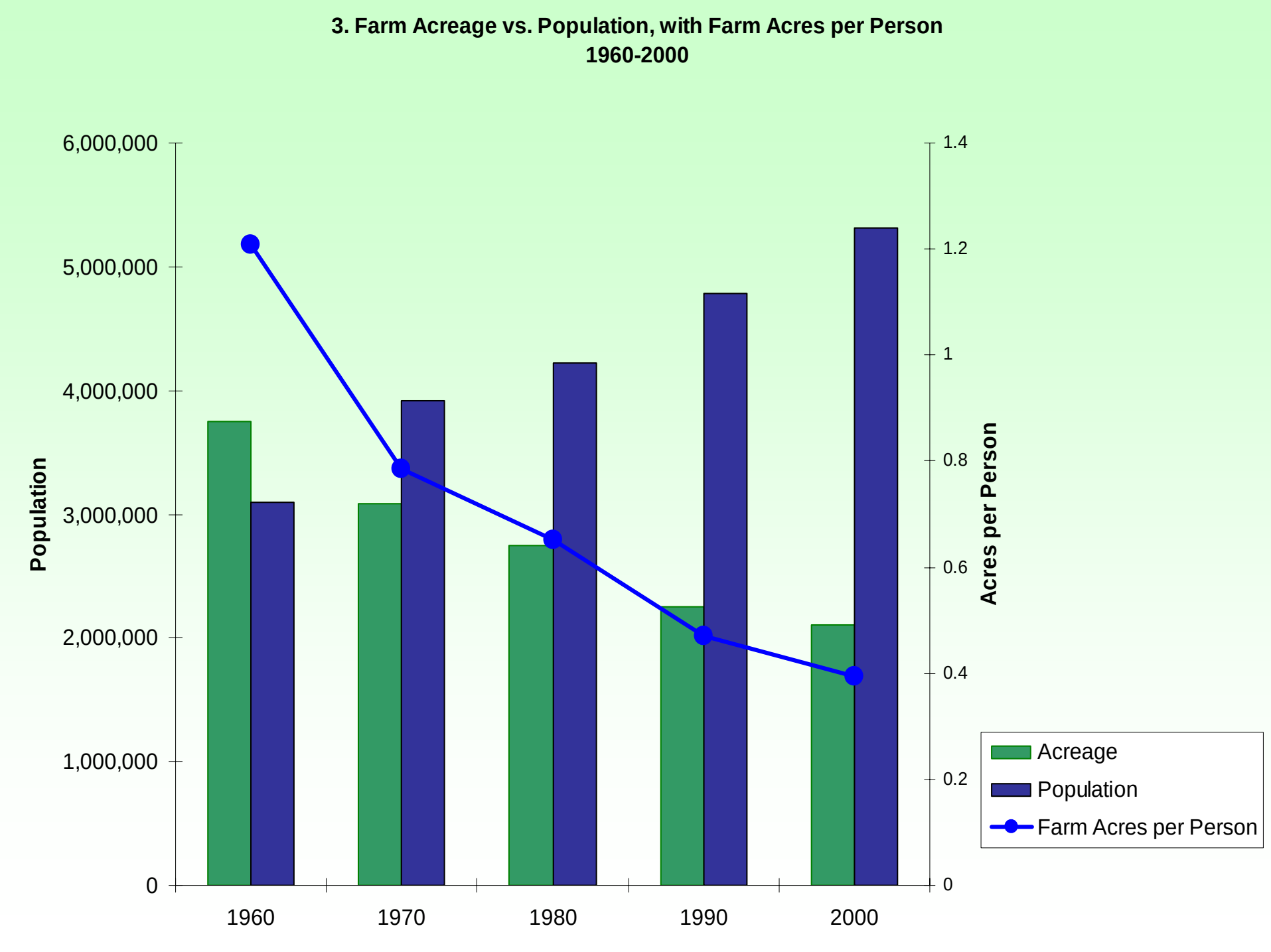
-Agricultural Services Division-

August, 2003

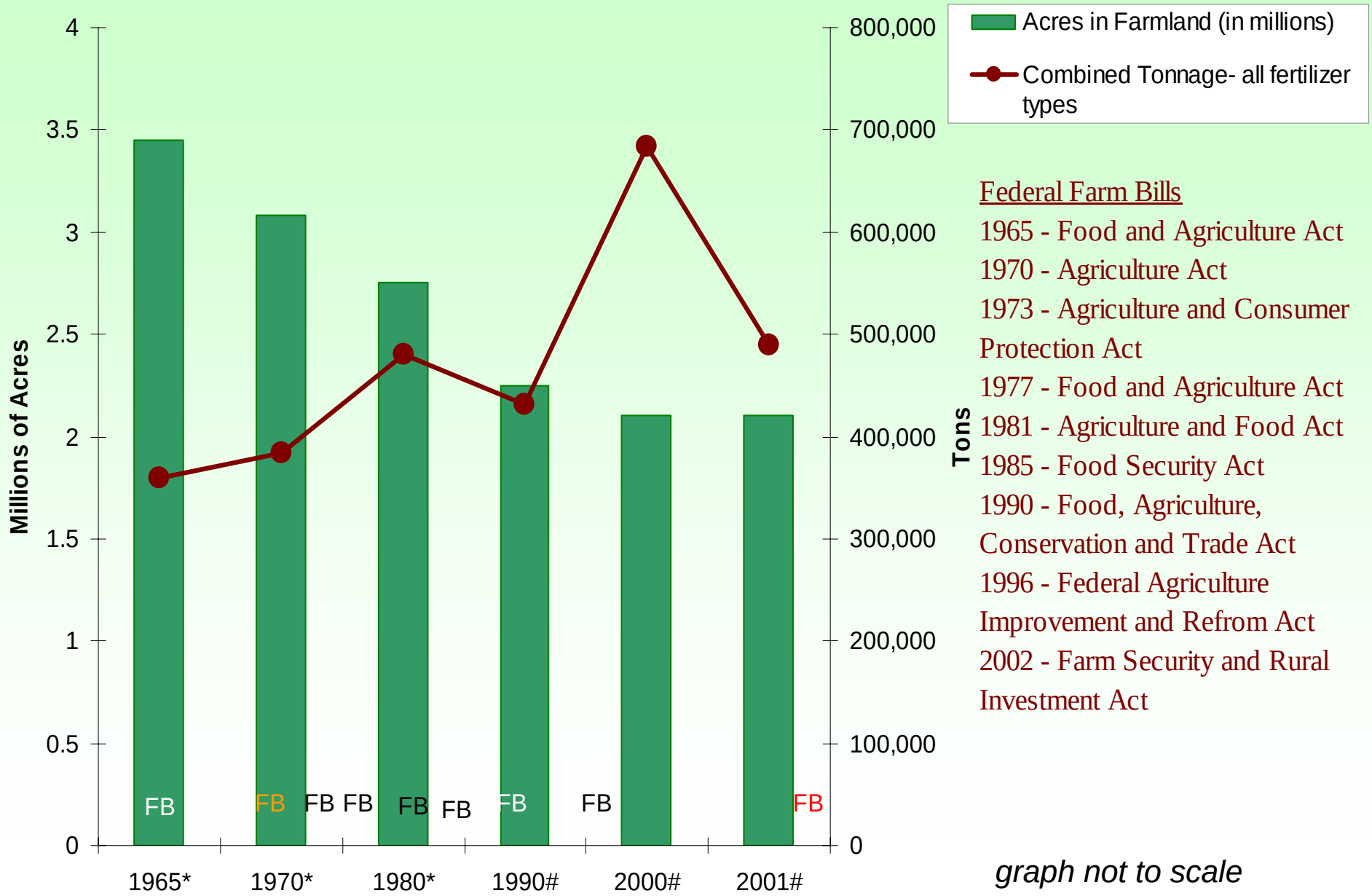
(revised March, 2005)


1. Maryland Farm Acreage
1960 to 2000
millions of acres
4
3.5
3
2.5
2
1.5
1
0.5
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
Acreage (in millions)

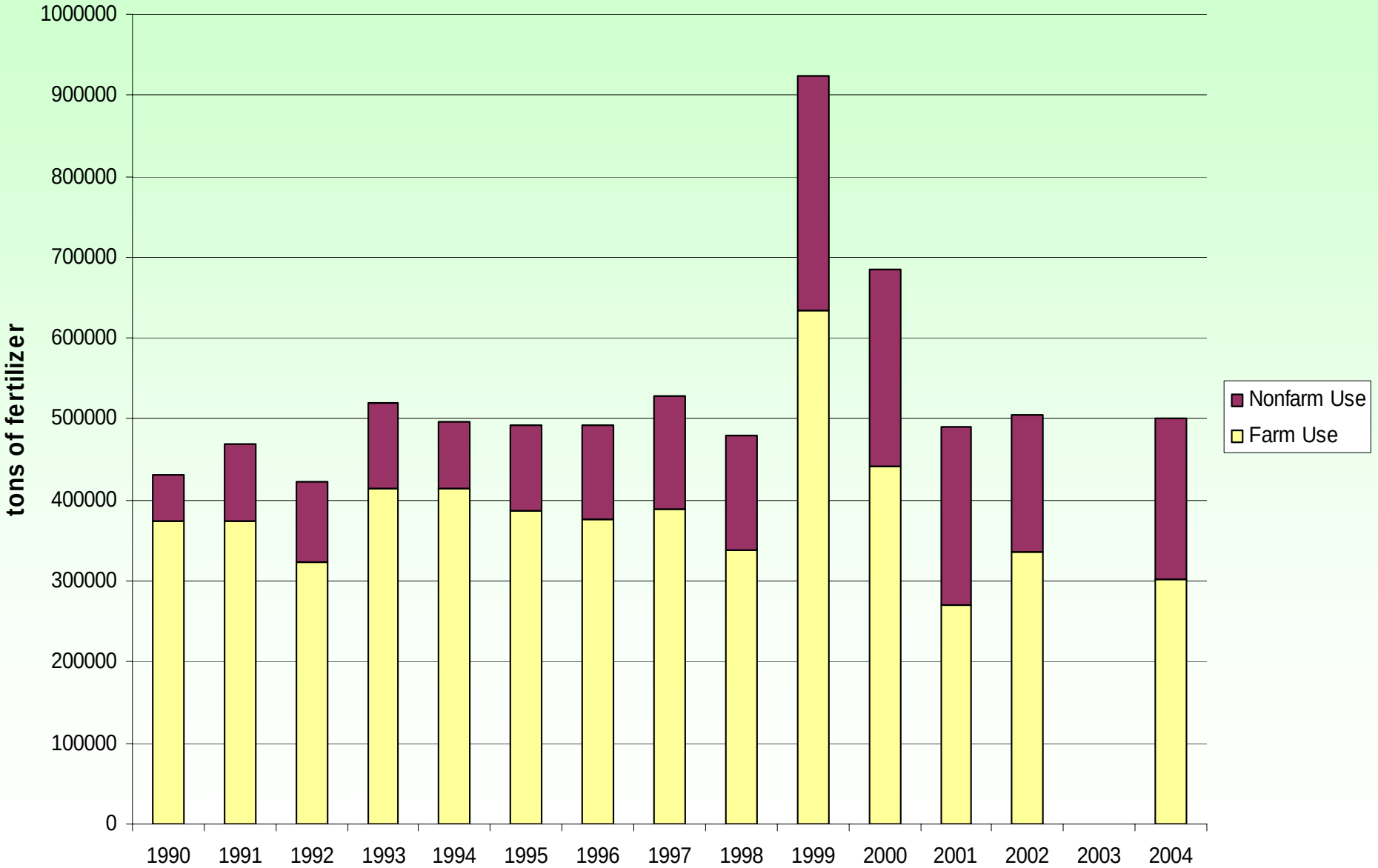

2. Maryland Population
1960-2000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
population
1960
1970
1980
1990
2000
Population

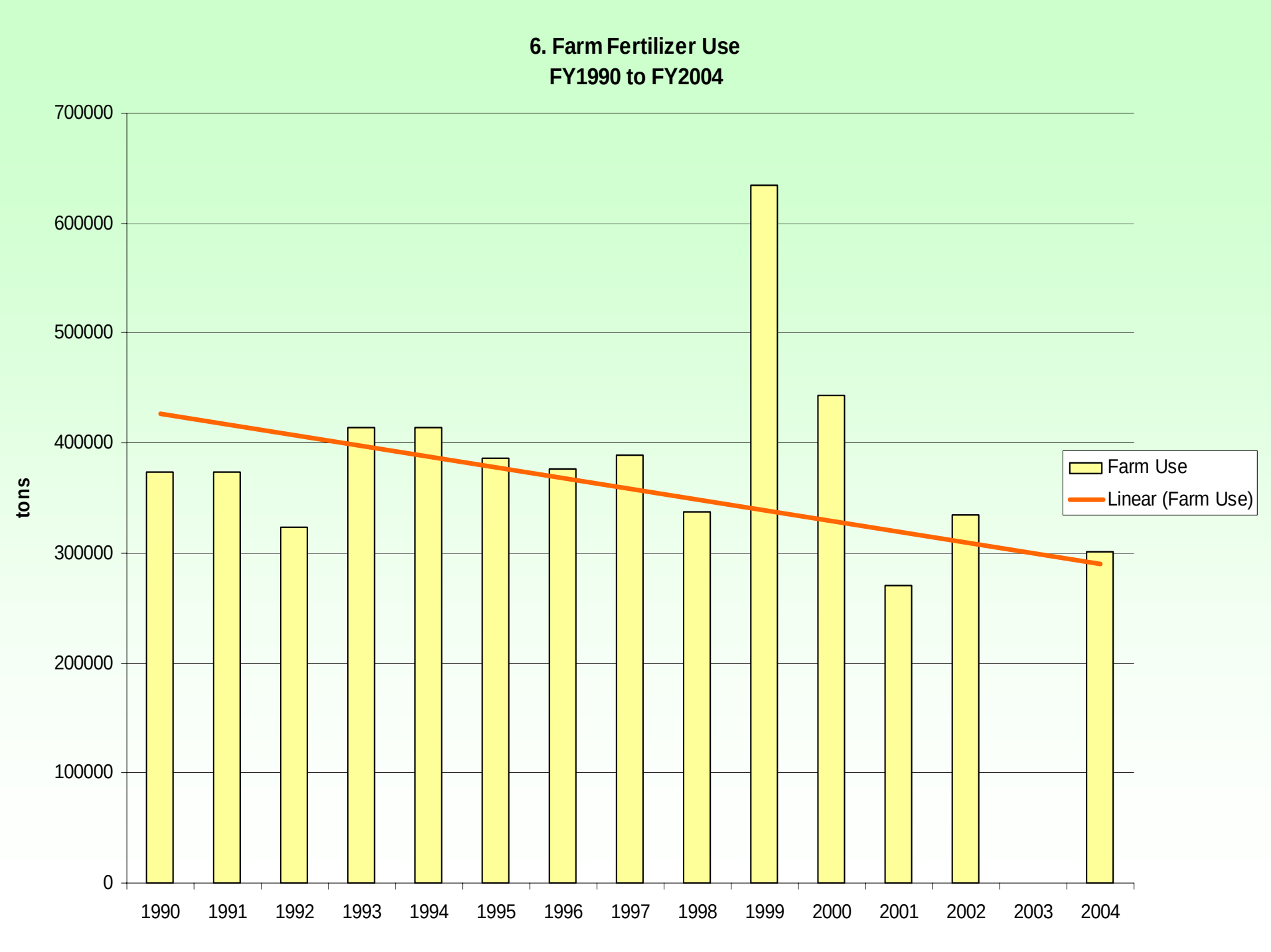

3. Farm Acreage vs. Population, with Farm Acres per Person
1960-2000
Population
Acres per Person
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1960
1970
1980
1990
2000
Acreage
Population
Farm Acres per Person

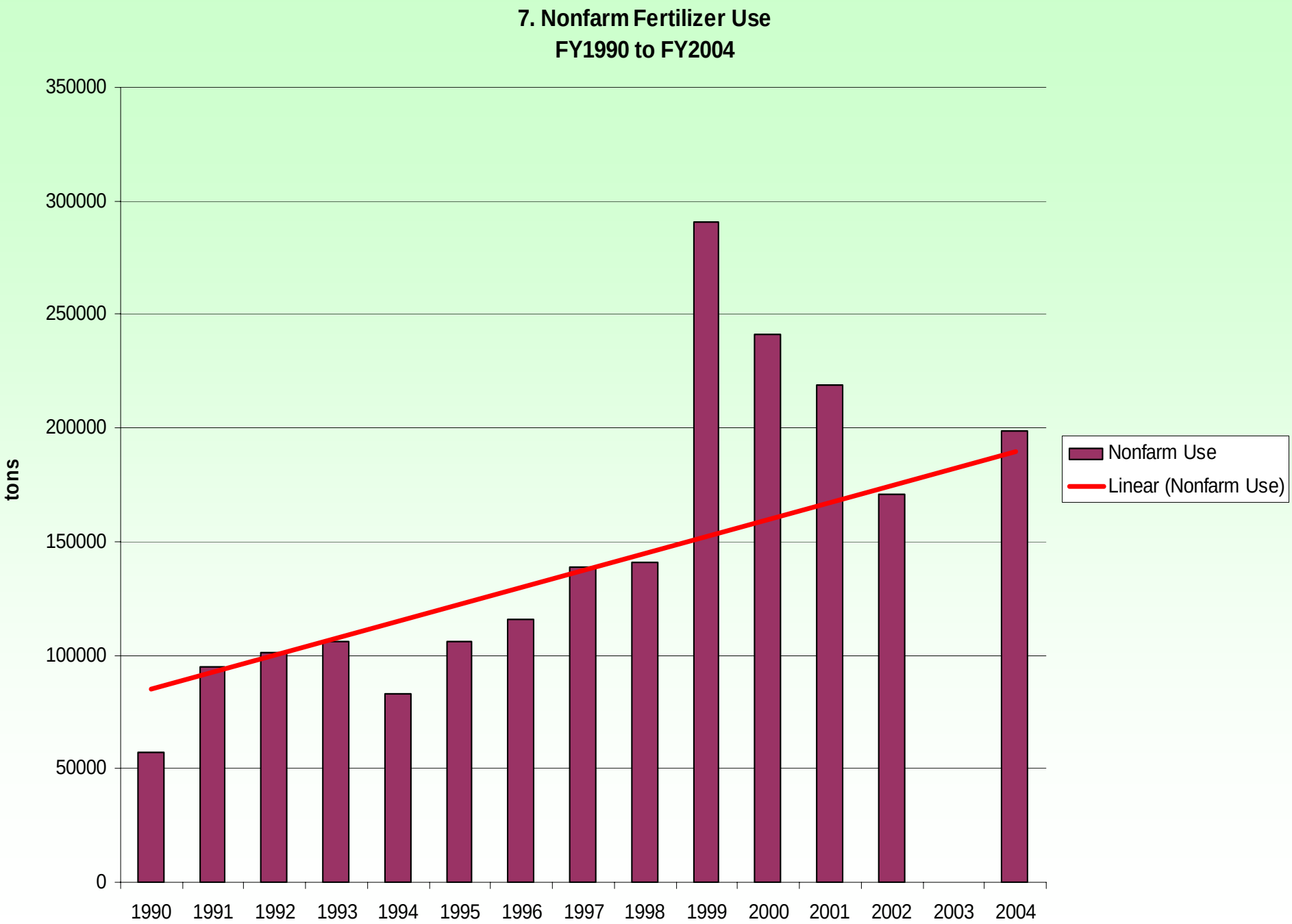
4. Total Maryland Fertilizer Use, 1965 to June 30, 2001



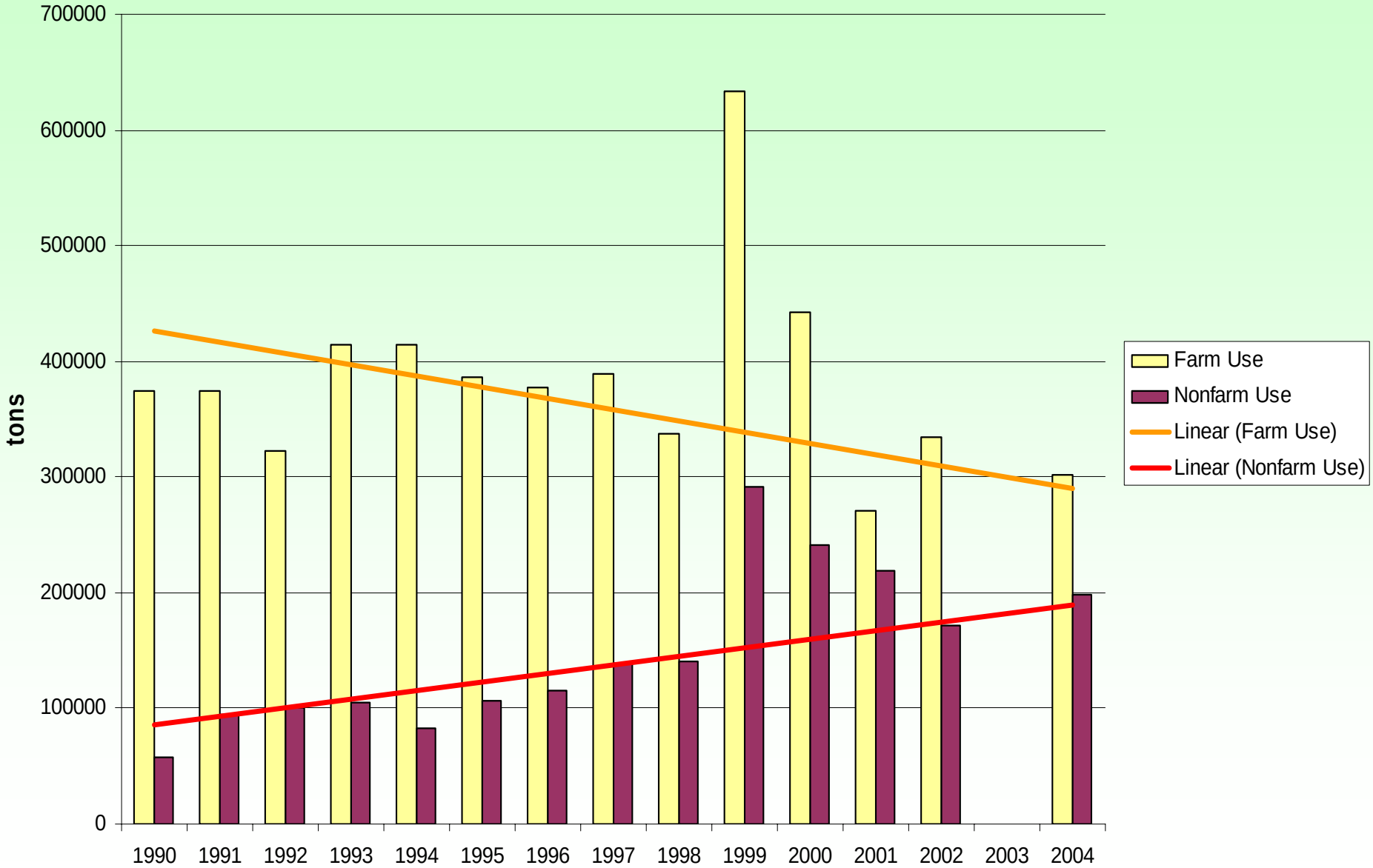
5. Total Maryland Fertilizer Use
FY1990 to FY2004



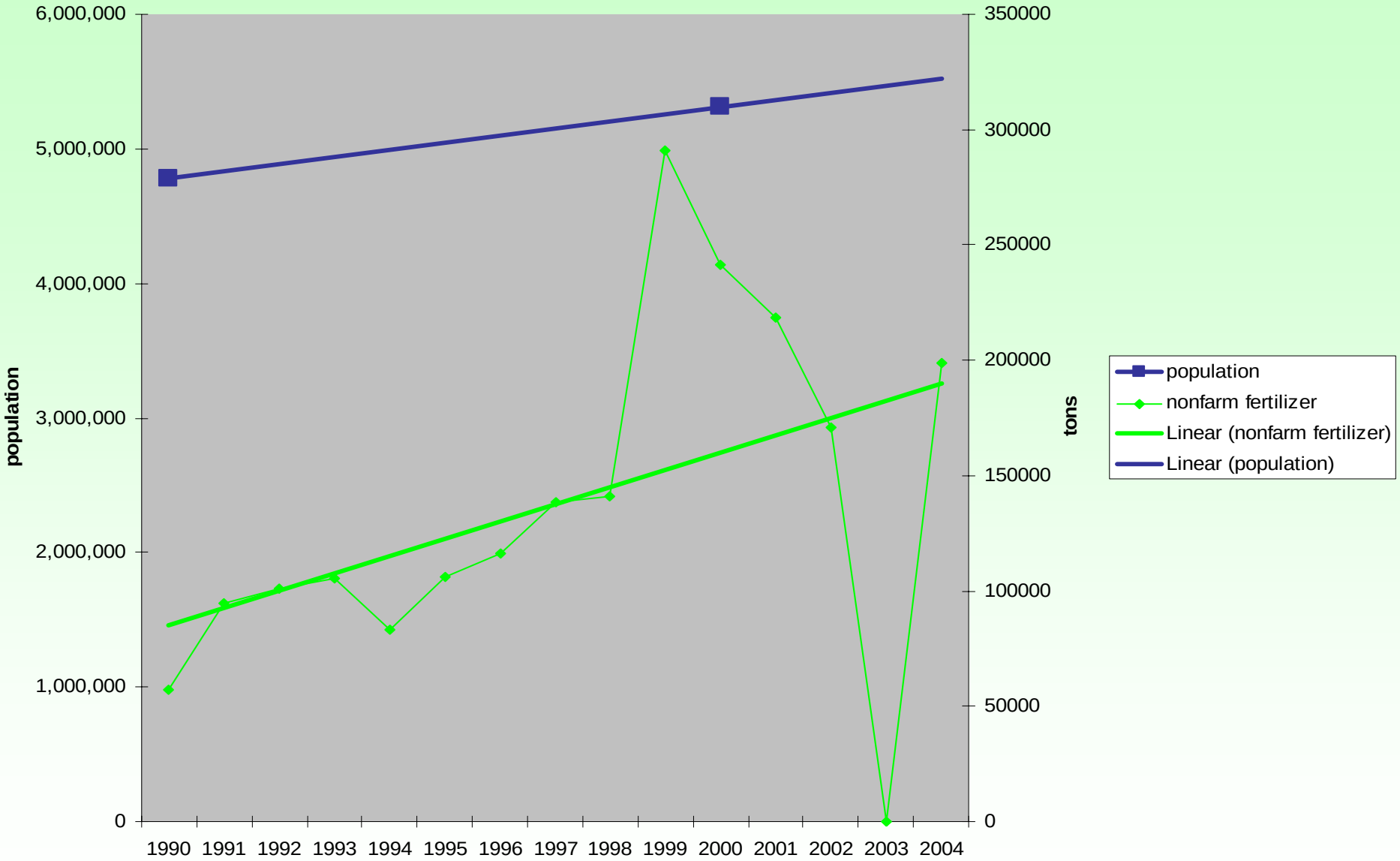

6. Farm Fertilizer Use
FY1990 to FY2004
700000
600000
500000
400000
300000
200000
100000
0
tons
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
Farm Use
Linear (Farm Use)


7. Nonfarm Fertilizer Use
FY1990 to FY2004
tons
350000
300000
250000
200000
150000
100000
50000
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
Nonfarm Use
Linear (Nonfarm Use)

8. Total Maryland Fertilizer Tonnage
FY1990 to FY2004, by Use

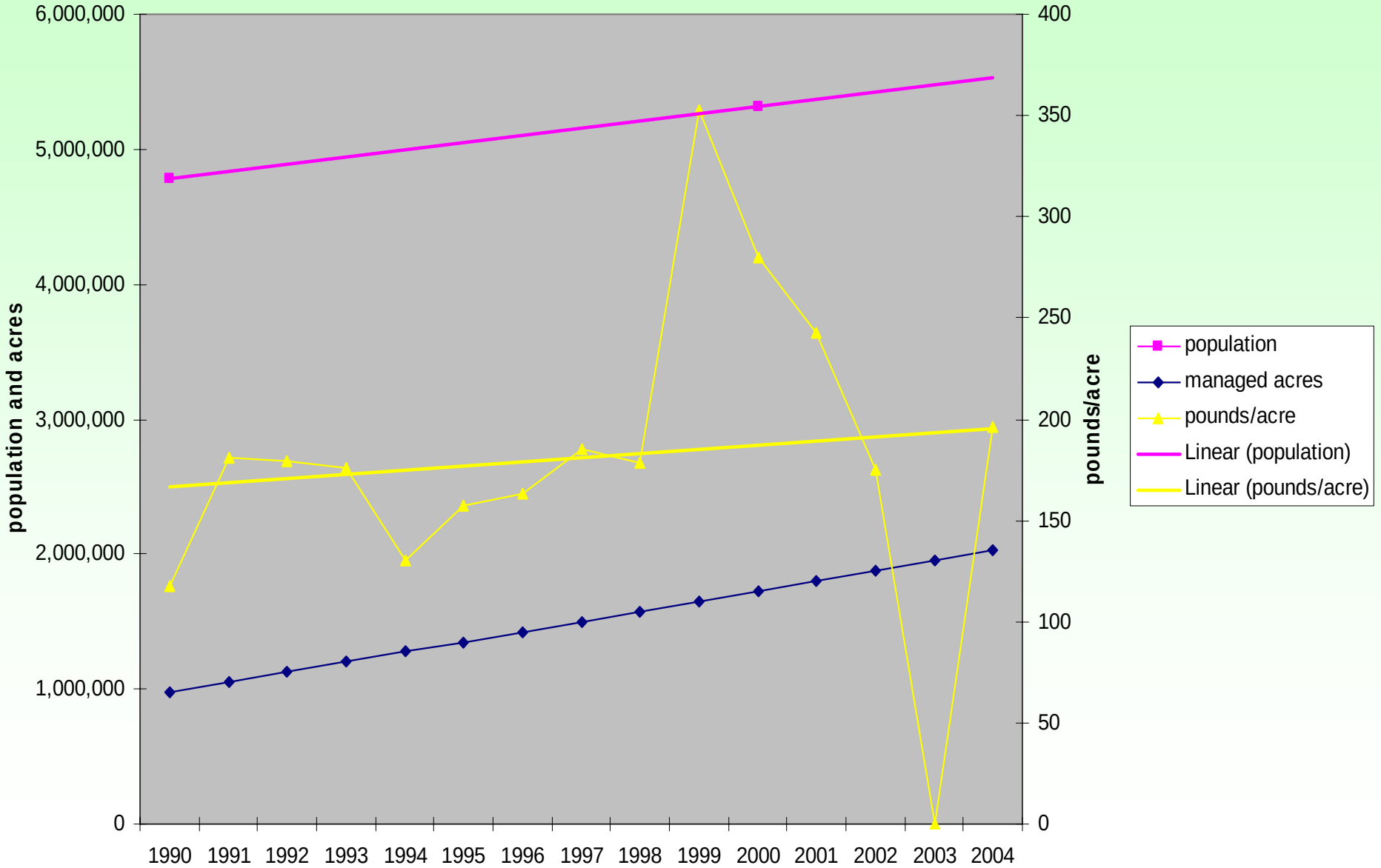


9. Maryland Population vs. Nonfarm Fertilizer Use, 1990-2004

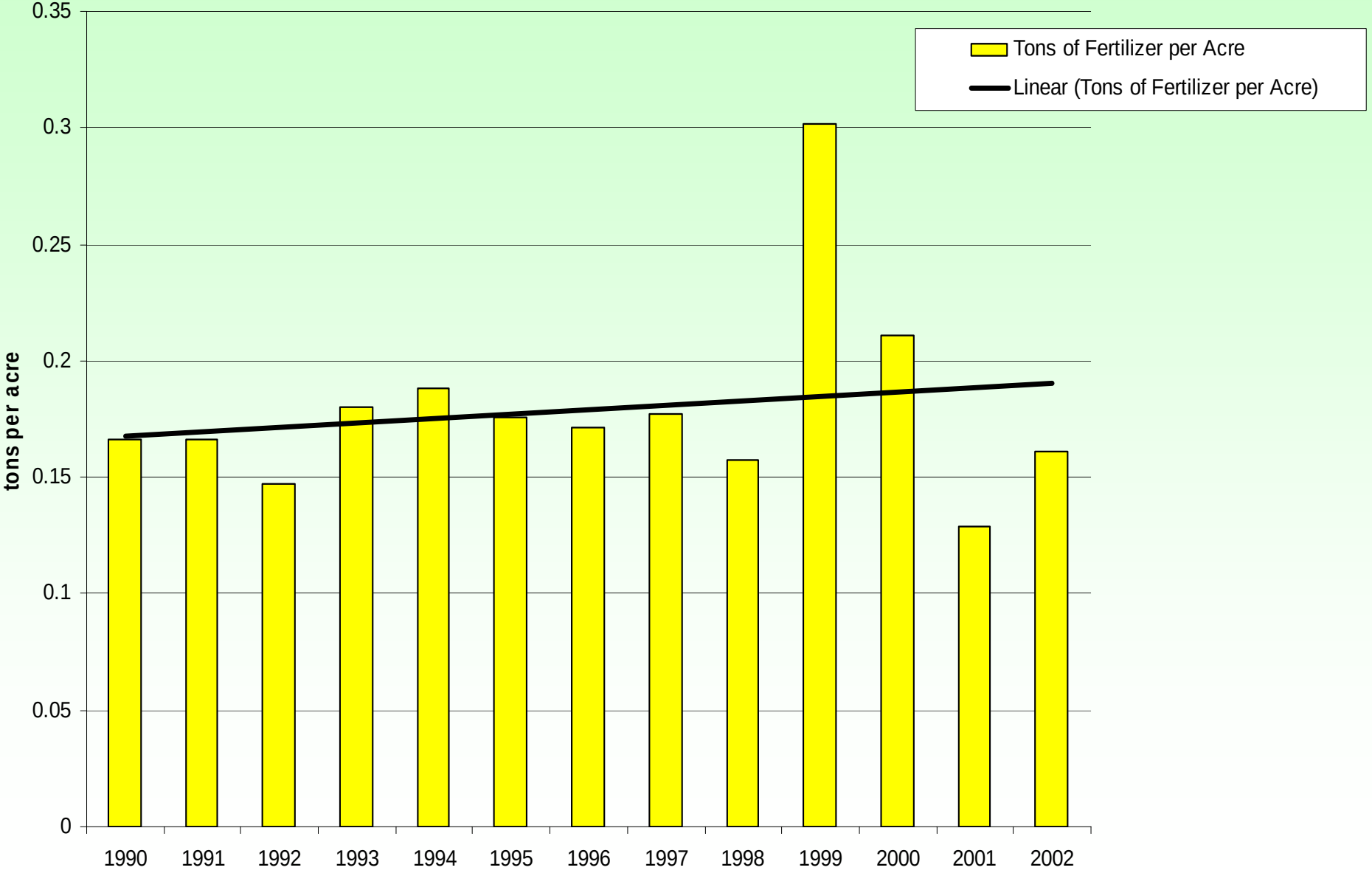


Source of Data: Maryland Department of Planning (based on 1990 and 2000 Census Reports); MDA Fertilizer Tonnage Reports 1990-2001
data for 2003 is not available

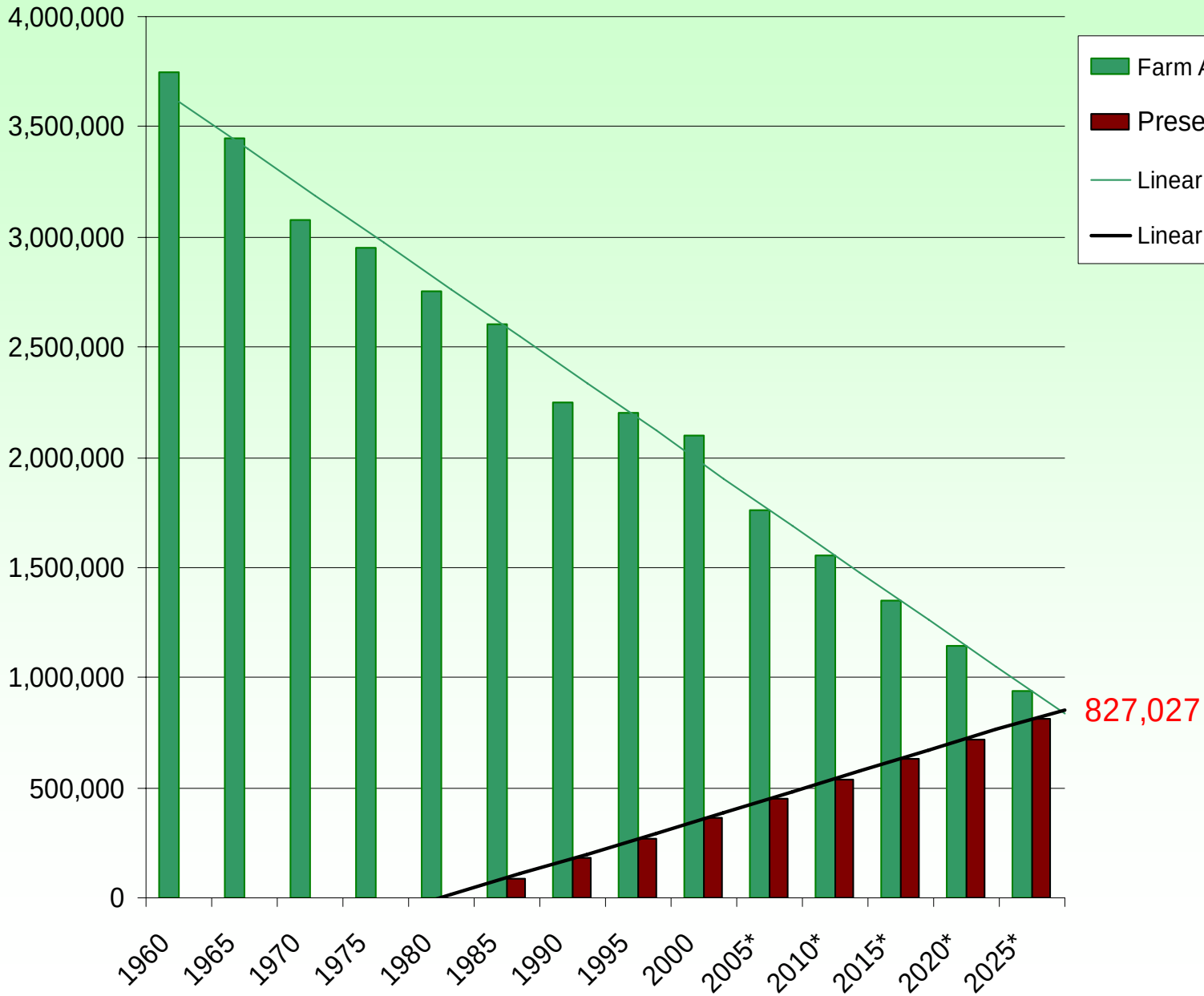
10. Population Trend, with Nonfarm Fertilizer Application Rates and Estimated Managed Acres (1990-2004)



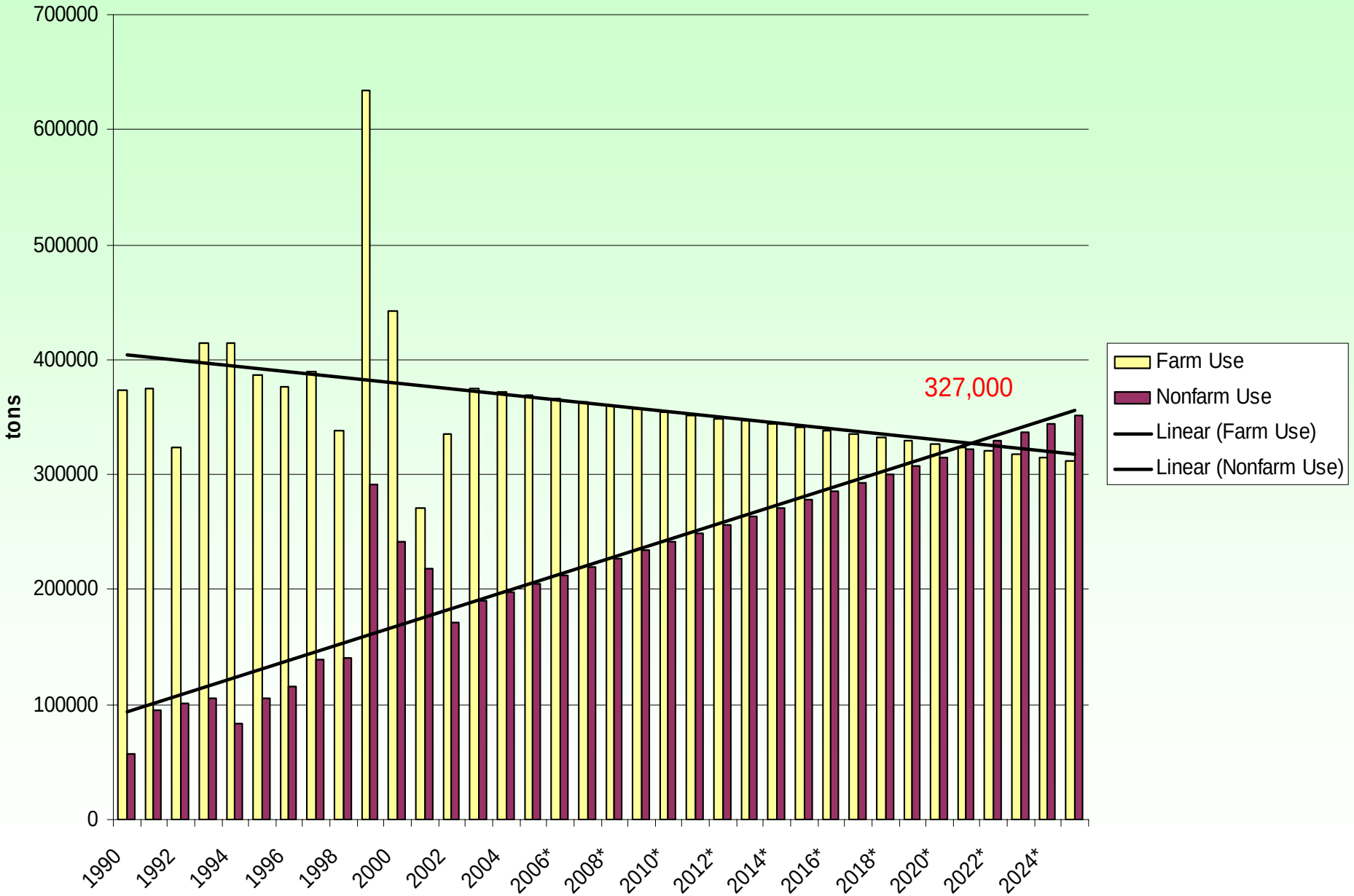
11. Farm Use Fertilizer Application 1990-2002
(tons per acre)



12. Maryland Farm Acreage Loss
Projections through 2035



13. Maryland Farm vs. Nonfarm Fertilizer Use, Projected through 2015



Data Sources

Maryland Agricultural Statistics Service

Maryland Department of Agriculture

Agriculture in Maryland – Summary for 2001-2002, 2003

Annual Fertilizer Tonnage Reports, 1990 to 2004 (*fertilizer data for 2003 not available*)

Maryland Department of Assessments and Taxation

Maryland Department of Planning

The Use of Fertilizers in the State of Maryland

Prepared by:
Montgomery County Department of Economic Development
Agricultural Services Division

Between 1960 and 2003, Maryland experienced a loss of 1.67 million acres of farmland. At the same time, the population increased by over 2 million people. Population trends show no sign of slowing; farm acreage loss also continues. New state residents are living on land that was once in agriculture. The ratio of farm acres to people dropped markedly, from 1.2 farm acres per person in 1960 to .4 acres per person in 2000. The Maryland Department of Agriculture reports that Maryland consists of 2.1 million acres of farmland, while the Department of Assessments and Taxation reports that Maryland consists of 2.644 million acres of agriculturally assessed farmland.

Overall fertilizer use for the state has shown a general upward trend, even as farm acres have decreased. This has several root causes. The first is an increase in efficiency; farmers, working from scientifically established nutrient standards, have learned to grow more on less land through a judicious application of fertilizers. The second, discussed in more detail below, is the increased use of fertilizers by the general populace.

The fluctuations visible in the fertilizer trend in Chart 4 are due to various factors, including Federal Farm Bills governing set-aside acreage, crop prices, as well as production decisions by farmers. Representatives from the MDA say that the cause of the sharp spike in fertilizer usage for the years 1999 and 2000 was caused by double reporting of tonnage numbers.

Total Maryland fertilizer use between 1990 and 2004 has averaged 485,780 tons, except for two spikes in 1999 (925,000 tons) and 2000 (684,000 tons). In 1990, non-farm fertilizer use averaged 13% of the total. After 1999, that average jumped to 37%, with 45% of fertilizer in 2001 represents non-farm use.